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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A photoacid generator, comprising:

an antenna group comprising an lodonium; and

a carborane-based group, wherein the carborane-based group is functionalized on a carbon atom by a group that modifies [[the]] a polarity of [[the]] anionic carborane.

2. (Original) The photoacid generator of claim 1, wherein the carborane-based group is halogenated by between one and six halogens.

3. (Original) The photoacid generator of claim 2, wherein the carborane-based group is hexachlorocarborane.

4. (Original) The photoacid generator of claim 1, wherein the carborane-based group is functionalized on at least one boron atom by a group having a high electronegativity.

5. (Original) The photoacid generator of claim 1, wherein the carborane-based group is functionalized by an etch-resistant group.

6. (Original) The photoacid generator of claim 1, wherein the carborane-based group is functionalized on a boron atom by an alkyl group.

7. (Cancelled)

8. (Cancelled)

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9. (Currently Amended) A composition, comprising:

a photoacid generator moiety comprising a carborane, wherein the [[carborane-based group]] carborane is functionalized on a carbon atom by a group that modifies [[the]] a polarity of [[the]] cationic carborane;

a photoimageable species; and

a quencher.

10. (Original) The composition of claim 9, wherein the composition is formulated to serve as a 193nm photoresist.

11. (Previously Presented) The composition of claim 9, wherein the composition is formulated to serve as an EUV photoresist sensitive to an electron beam.

12. (Previously Presented) The composition of claim 11, wherein the EUV photoresist is sensitive to light having a wavelength of 13.5nm.

13. (Cancelled)

14. (Previously Presented) The composition of claim 9, further comprising an additive.

15. (Previously Presented) The composition of claim 14, wherein the additive is in the approximate range of 0.1 – 5% by weight of the composition.

16. (Previously Presented) The composition of claim 9, further comprising a solvent.

17. (Original) The composition of claim 16, wherein the solvent is in the approximate range of 1% - 5% by weight of the composition.

18. (Currently Amended) The composition of claim 9, wherein the photoacid generator moiety comprising [[a]] the carborane is in the approximate range of 0.1% and 5% by weight of the composition.

19. (Currently Amended) The composition of claim 9, wherein the photoacid generator moiety comprising [[a]] the carborane is in the approximate range of 0.5% and 2.5% by weight of the composition.

20. (Previously Presented) The composition of claim 9, wherein the photoimageable species is a polymer.

21. (Previously Presented) The composition of claim 9, wherein the photoimageable species is in the approximate range of 80% and 97% by weight of the composition.

22.-24. (Cancelled)

25. (Currently Amended) A method comprising:

applying a photoresist to a substrate, the photoresist comprising a carborane-based photoacid generator, in which the carborane-based photoacid generator is functionalized on a carbon atom by a group that modifies a polarity of ionic carborane;

patterning the photoresist by irradiating the photoresist; and

etching the substrate.

26. (Currently Amended) The method of claim 25, wherein applying [[a]] the photoresist to the substrate comprises applying a chemically amplified photoresist to the substrate.

27. (Original) The method of claim 26, wherein the chemically amplified resist is a high activation energy resist.
28. (Original) The method of claim 25, wherein patterning the photoresist by irradiating the photoresist comprises exposing the photoresist to light having a wavelength of 193nm.
29. (Original) The method of claim 25, wherein patterning the photoresist by irradiating the photoresist comprises exposing the photoresist to light having a wavelength in the extreme ultraviolet region of the spectrum.
30. (Original) The method of claim 29, wherein the wavelength in the extreme ultraviolet region of the spectrum is 13.5nm.
31. (Previously Presented) The method of claim 25, wherein patterning the photoresist by irradiating the photoresist comprises exposing the photoresist to an electron beam.
32. (Currently Amended) A photoacid generator, comprising:
- an antenna group comprising a sulfonium; and
- a carborane-based group, wherein the carborane-based group is functionalized on a carbon atom by a group that modifies [[the]] a polarity of [[the]] anionic carborane.
33. (Previously Presented) The photoacid generator of claim 32, wherein the sulfonium comprises triarylsulfonium.
34. (Previously Presented) The photoacid generator of claim 32, wherein the sulfonium is further modified by alkyl groups.
35. (Currently Amended) A composition, comprising:

a photoacid generator moiety comprising a carborane, wherein the [[carborane-based group]] carborane is functionalized on a carbon atom by a group that modifies [[the]] a polarity of [[the]] cationic carborane;

a photoimageable species; and

a quencher[[]; and

reaction products thereof]].

36. (Previously Presented) The composition of claim 34, wherein the composition is formulated to serve as a 193 nm photoresist.

37. (Previously Presented) The composition of claim 34, wherein the composition is formulated to serve as an EUV photoresist.

38. (Previously Presented) The composition of claim 34, wherein the composition is formulated to serve as a photoresist sensitive to an electron beam.